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DATE: Friday, July 21, 2006

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<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L20 L19 and actuator.clm.	1
<input type="checkbox"/>	L19 (convertible checkout station).clm.	2
<i>DB=USPT; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L18 (actuator and convertible checkout).clm.	0
<input type="checkbox"/>	L17 US-6837428-B2.did.	1
<i>DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L16 L3	5
<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L15 L14 and (convertible or convertable)	0
<input type="checkbox"/>	L14 L3 and (self?checkout).ab.	56
<input type="checkbox"/>	L13 L11 and convertable	0
<input type="checkbox"/>	L12 L11 and convertible	0
<input type="checkbox"/>	L11 L8 and (self?checkout).ab.	28
<input type="checkbox"/>	L10 L9 and ((cashier or self?check\$) near2 (mode or operati\$))	20
<input type="checkbox"/>	L9 L8 and L3	74
<input type="checkbox"/>	L8 L2 or (235/383).ccls.	4014
<input type="checkbox"/>	L7 L6 and L2	0
<input type="checkbox"/>	L6 L5 and configur\$	34
<input type="checkbox"/>	L5 L4 and actuator	35
<input type="checkbox"/>	L4 L3 and operation\$	205
<input type="checkbox"/>	L3 self?checkout and (cash or cashier)	220
<input type="checkbox"/>	L2 L1 or (235/2 235/7R).ccls.	2789
<input type="checkbox"/>	L1 (717/106 717/107 717/120 717/121 717/122).ccls.	1361

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Search*

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TITLE: Product e.g. pumpkin, price determining apparatus for grocery, has camera finding product by type, and computer terminal finding product weight as function of volume and its density, and price as function of price/weight ratio

INVENTOR: WERDEN, T C

PRIORITY-DATA: 2003US-0699770 (November 4, 2003)

PATENT-FAMILY:

PUB-NO US 20050097064 A1 PUB-DATE May 5, 2005 LANGUAGE English PAGES 006 MAIN-IPC G06F017/60

INT-CL (IPC): G06 F 17/60

ABSTRACTED-PUB-NO: US20050097064A

BASIC-ABSTRACT:

NOVELTY - The apparatus has a camera (12) detecting and identifying a product by type. Volume of the product is found upon image information from the camera. A computer terminal (13) receives the product type and product volume information, and accesses a database to determine its density. The terminal computes weight of the product as a function of volume and its density, and product price as a function of price/weight ratio.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of determining a product weight and calculating price.

USE - Used for determining the price of a product e.g. vegetables such as pumpkin, in grocery, by weight.

ADVANTAGE - The apparatus can be applied both to cashier-assisted check out and to self-checkout, whereby the self-checkout customer needs only to place the product on a moving conveyor for pricing to occur. The cost of the camera is less than the cost of a scale, thereby saving cost for determining prices of product. The apparatus reduces errors since the cashier/customer cannot select the wrong product using the apparatus. The apparatus increases customer satisfaction because the customer does not need to understand a system or follow detailed and complicated instructions. The utilization of the apparatus avoids selection of product from a list and also longer typing of product codes.

DESCRIPTION OF DRAWING(S) - The drawing shows a pictorial representation of a product e.g. pumpkin, price determining apparatus.

Conveyor 11

Camera 12

Computer terminal 13

Adjacent pedestal 14

ABSTRACTED-PUB-NO: US2005009706A1

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg. 1/3

3. Document ID: US 6856964 B1

L16: Entry 3 of 5

File: DWPI

Feb 15, 2005

DERWENT-ACC-NO: 2005-170839

DERWENT-WEEK: 200518

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TITLE: Self-checkout terminal system for use in retail store, has core application software module converting device update outputs from emulated native vendor software application into updates to peripheral output devices

INVENTOR: SADLER, R F

PRIORITY-DATA: 1999US-0273363 (March 22, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 6856964 B1</u>	February 15, 2005		009	G06F017/60

INT-CL (IPC): G06 F 17/60

ABSTRACTED-PUB-NO: US 6856964B

BASIC-ABSTRACT:

NOVELTY - The system has a core application software module (50) to control a self-checkout terminal. An emulator module (46) emulates a native vendor software application in cashier-operated checkout terminals. The module (50) converts inputs received at peripheral input devices into inputs expected by the emulated application. The module (50) converts device update outputs from the emulated application into updates to the devices.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for integrating a self-checkout terminal into already existing network of retail terminals.

USE - Used in a retail store.

ADVANTAGE - The software module converts the device update outputs from the emulated application into the updates to the peripheral output devices, thus integrating the terminal with the cashier-operated terminals without need to rewrite already existing code and without risk of pricing errors.

DESCRIPTION OF DRAWING(S) - The drawing shows a diagram of a retail checkout network.

Self-checkout terminal system 10a

Vendor server 12a

Emulator module 46

Operating system 48

Core application software module 50

ABSTRACTED-PUB-NO: US 6856964B

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg. 2/4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. Desc	Clip Img	Ima
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4. Document ID: US 20030009384 A1

L16: Entry 4 of 5

File: DWPI

Jan 9, 2003

DERWENT-ACC-NO: 2003-312014

DERWENT-WEEK: 200518

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TITLE: Self-checkout terminal system used in retail establishments, emulates native vendor software application in cashier-operated checkout terminals network, independent from existing self-checkout core application

INVENTOR: SADLER, R F

PRIORITY-DATA: 1999US-0273363 (March 22, 1999), 2002US-0195588 (July 15, 2002)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 20030009384 A1</u>	January 9, 2003		010	G06F017/60

INT-CL (IPC): G06 F 17/60

ABSTRACTED-PUB-NO: US20030009384A

BASIC-ABSTRACT:

NOVELTY - An emulator module (46) emulates, independent from the self-checkout core application, a native vendor software application in a network of cashier-operated checkout terminals (14a) administered by a vendor server (12a). The self-checkout core application converts inputs received at the peripheral input devices into inputs expected by the emulated application, and converts device update outputs from the software application into updates to the peripheral output devices.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for self-checkout terminal and existing retail terminals integrating method.

USE - Used in retail establishments.

ADVANTAGE - Enables integration of a self-checkout terminal into an already existing cashier-operated terminal environment, without the need to rewrite already existing code and without the risk of pricing errors, thereby preserving the existing functionality.

DESCRIPTION OF DRAWING(S) - The figure shows an illustration of the retail checkout network integrated with self-checkout terminal.

vendor server 12a

cashier-operated checkout terminals 14a

emulator module 46

self-checkout core application module 50

ABSTRACTED-PUB-NO: US20030009384A

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg. 2/4

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KMC | Draw Desc | Clip Img | Img

5. Document ID: AU 2002351574 A8, US 20030001007 A1, WO 2003003322 A2, AU 2002351574 A1, US 6837428 B2

L16: Entry 5 of 5

File: DWPI

Oct 27, 2005

DERWENT-ACC-NO: 2003-255785

DERWENT-WEEK: 200638

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TITLE: Self-checkout system has processor that controls movement of conveyor, based on signals output by sensor unit, that indicate entry of item with security tag into security zone

INVENTOR: ALLARD, J; DICKOVER, S ; DICKOVER, W ; KURTZ, C ; LEE, M ; MARTIN, S ; NESBIT, T ; RADZIMSKI, M ; WALLACE, R ; WILLIAMS, D

PRIORITY-DATA: 2001US-0943432 (August 7, 2001), 2001US-273097P (March 2, 2001), 2001US-301714P (June 28, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
AU 2002351574 A8	October 27, 2005		000	G07G001/00
US 20030001007 A1	January 2, 2003		022	G06K015/00
WO 2003003322 A2	January 9, 2003	E	000	G07G001/00
AU 2002351574 A1	March 3, 2003		000	G07G001/00
US 6837428 B2	January 4, 2005		000	G06K015/00

INT-CL (IPC): A47 F 9/04; G06 K 15/00; G07 G 1/00; G07 G 1/12

ABSTRACTED-PUB-NO: US20030001007A

BASIC-ABSTRACT:

NOVELTY - A sensor unit has a scale to measure weight of an item with active security tag. A processor controls movement of a conveyor, based on signals output by the sensor unit, that indicate an entry of the item into a security zone. The processor controls a transaction terminal with a payment acceptor and a cash dispenser. A screen is displayed to provide indication of total amount to be paid for selected items.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) self-checkout apparatus;
- (2) security tag deactivation apparatus;
- (3) security tag deactivation method; and
- (4) transaction conduction method.

USE - For self-purchase of products such as video tape and magnetic computer disk.

ADVANTAGE - Enables the shopper to settle the payment for purchase item easily.

ABSTRACTED-PUB-NO: US20030001007A

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg. 0/20

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMIC](#) [Draw Desc](#) [Image](#)[Clear](#)[Generate Collection](#)[Print](#)[Fwd Refs](#)[Bkwd Refs](#)[Generate OACS](#)

Terms

Documents

L3

5

Display Format: [CLM](#) [Change Format](#)[Previous Page](#)[Next Page](#)[Go to Doc#](#)

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)[First Hit](#) [Generate Collection](#)

L19: Entry 2 of 2

File: PGPB

Jan 9, 2003

PGPUB-DOCUMENT-NUMBER: 20030006098

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030006098 A1

TITLE: Checkout system convertible between assisted and non-assisted configurations

PUBLICATION-DATE: January 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Wike, Charles K. JR.	Sugar Hill	GA	US
Nugent, Jennifer I.	Alpharetta	GA	US

US-CL-CURRENT: 186/61

CLAIMS:

What is claimed is:

1. A checkout station comprising: a housing having a counter; a scanner movably mounted relative to said counter and having a scanning face operative to scan indicia, a first position wherein said scanning face has a first orientation corresponding to one of an assisted mode of operation and a self-assisted mode of operation, and a second position wherein said scanning face has a second orientation corresponding to the other of said assisted mode of operation and said self-assisted mode of operation, said scanner being selectively movable between said first and second positions; a first display mounted on said counter and having a display face operative to display purchase transaction information to a clerk during the assisted mode of operation; and a second display mounted on said counter and having a display face operative to display purchase transaction information to a customer during the self-assisted mode of operation, a first position wherein said display face has a first orientation corresponding to one of said self-assisted mode of operation and said assisted mode of operation, and a second position wherein said display face has a second orientation corresponding to the other of said self-assisted mode of operation and said assisted mode of operation, said second display being selectively movable between said first and second positions.
2. The checkout station of claim 1, wherein said first positions of said scanner and said second display correspond to said unassisted mode of operation, and said second positions of said scanner and said second display correspond to said assisted mode of operation.
3. The checkout station of claim 2, wherein said first orientation of said second display is toward a front of said housing and said second orientation of said second display is stowed relative to said counter.
4. The checkout station of claim 1, wherein said first display includes a clerk-accessible keypad.
5. The checkout station of claim 1, wherein said scanner is a conventional bar code scanner.
6. The checkout station of claim 1, further comprising: a customer bag well; a cashier bag well; and a payment acceptor.

7. System; comprising a plurality of checkout stations disposed along a single, serial flow lane, each checkout station operative to perform purchase transactions and being convertible between a self-checkout configuration and an assisted checkout configuration.

8. The system of claim 7, wherein the single, serial flow lane defines a longitudinal axis, and wherein the plurality of checkout stations each has a front side and a back side, and wherein the front sides of each of the plurality of checkout stations are angled with respect to the longitudinal axis of the single, serial flow lane.

9. The system of claim 8, wherein each one of the plurality of checkout stations comprise a counter, a scanner pivotally supported on said counter, a first display supported on said counter, and a second supported on said counter.

10. The system of claim 9, wherein each said plurality of checkout stations is convertible by rotation of the respective scanner from a first orientation to a second orientation and by activation of only one of said first and second displays or activation of both of said first and second displays.

11. The system of claim 10, wherein said first orientation is toward the front side of the counter which supports the checkout station in the self-checkout configuration, and said second orientation is toward a side of the counter which supports the checkout station in the assisted configuration.

12. A checkout system, comprising: a single serial flow lane; a plurality of checkout stations adjacent said single serial flow lane, each checkout station including a rotatable scanner, a customer display, and a clerk display, each checkout station being convertible between an assisted configuration and a self-assisted configuration, wherein conversion of any one of the plurality of checkout stations comprises rotating the rotatable scanner from a first position to a second position, and selective activation of said customer display and said clerk display, each one of the plurality of checkout stations defining a longitudinal axis; and wherein the longitudinal axis of each checkout station is skewed relative to said single serial flow lane.

13. The checkout system of claim 12, wherein the plurality of checkout stations each is connected to at least one other of said plurality of checkout stations via a basket counter.

14. The checkout system of claim 12, wherein each one of said plurality of checkout stations is convertible by rotation of the respective scanner from a first orientation to a second orientation.

15. The checkout system of claim 14, wherein said first orientation is toward said single serial flow lane which supports the checkout station in the self-checkout configuration, and said second orientation is toward a side opposite said single serial flow lane which supports the checkout station in the assisted configuration

16. A method of checkout comprising: providing a plurality of convertible checkout stations, each convertible checkout station operative to perform a purchase transaction and including a rotatable scanner, each convertible checkout station being convertible between an assisted configuration and a self-assisted configuration, wherein conversion of any one of the plurality of convertible checkout stations comprises rotating the rotatable scanner from a first position to a second position, the plurality of convertible checkout stations defining a front and a rear; providing a single serial flow lane adjacent the front of each one of said plurality of convertible checkout stations for serial access to and from the plurality of convertible checkout stations, the single serial flow lane defining a longitudinal axis; and angling the front of each convertible checkout station relative to the longitudinal axis.

[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

[Previous Doc](#) [Next Doc](#) [Go to Doc#](#)
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L21: Entry 1 of 1

File: USPT

Jul 8, 2003

US-PAT-NO: 6588549

DOCUMENT-IDENTIFIER: US 6588549 B2

TITLE: Checkout system convertible between assisted and non-assisted configurations

DATE-ISSUED: July 8, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wike, Jr.; Charles K.	Sugar Hill	GA		
Nugent; Jennifer I.	Alpharetta	GA		

US-CL-CURRENT: 186/61; 235/383

CLAIMS:

What is claimed is:

1. A checkout system, comprising: a single serial flow lane; a plurality of checkout stations disposed adjacent to said single serial flow lane, wherein each of said plurality of checkout stations is (i) operative to perform purchase transactions, and (ii) convertible between a self-checkout configuration and an assisted checkout configuration, and further wherein each of said plurality of checkout stations defines a customer side and a store personnel side; and a shelf interposed between each set of adjacent checkout stations of said plurality of checkout stations, said shelf being movable between (i) a first position in which said shelf creates a barrier between said store personnel side and said customer side, and (ii) a second position in which an access opening is created between said store personnel side and said customer side that allows passage from said store personnel side to said customer side, wherein the single serial flow lane defines a flow lane axis, wherein each of the plurality of checkout stations defines a checkout station orientation axis, and wherein each of the plurality of checkout stations are skewed relative to the single serial flow lane such that said flow lane axis and said checkout station orientation axis define an angle θ , wherein $10^\circ < \theta < 60^\circ$.
2. The checkout system of claim 1, wherein: said shelf defines a shelf orientation axis, and said shelf is positioned relative to the single serial flow lane such that said flow lane axis and said shelf axis are parallel to each other.
3. The checkout system of claim 1, wherein $20^\circ < \theta < 40^\circ$.
4. The checkout system of claim 3, wherein θ is equal to about 25° .
5. The checkout system of claim 1, wherein: each of the plurality of checkout stations including a rotatable scanner, a customer display, and a clerk display, conversion of any one of the plurality of checkout stations between said self-checkout configuration and said assisted checkout configuration comprises rotating the rotatable scanner from a first location to a second location, and selective activation of said customer display and said clerk display.
6. The checkout system of claim 1, wherein each of said plurality of checkout stations is

operative to receive payment for purchases performed during said purchase transactions.

7. A checkout system, comprising: a single serial flow lane; and a plurality of checkout stations disposed adjacent to said single serial flow lane, each of said plurality of checkout stations being (i) operative to perform purchase transactions, and (ii) convertible between a self-checkout configuration and an assisted checkout configuration, wherein the single serial flow lane defines a flow lane axis, wherein each of the plurality of checkout stations defines a checkout station orientation axis, and wherein each of the plurality of checkout stations are skewed relative to the single serial flow lane such that said flow lane axis and said checkout station orientation axis define an angle θ , and wherein $10^\circ < \theta < 60^\circ$.

8. The checkout system of claim 7, wherein: a shelf defines a shelf orientation axis, and said shelf is positioned relative to the single serial flow lane such that said flow lane axis and said shelf axis are parallel to each other.

9. The checkout system of claim 7, wherein $20^\circ < \theta < 40^\circ$.

10. The checkout system of claim 9, wherein θ is equal to about 25° .

11. The checkout system of claim 7, wherein: each of the plurality of checkout stations including a rotatable scanner, a customer display, and a clerk display, conversion of any one of the plurality of checkout stations between said self-checkout configuration and said assisted checkout configuration comprises rotating the rotatable scanner from a first location to a second location, and selective activation of said customer display and said clerk display.

12. The checkout system of claim 7, wherein each of said plurality of checkout stations is operative to receive payment for purchases performed during said purchase transactions.

13. The checkout system of claim 12, wherein each of said plurality of checkout stations is operative to receive payment for purchases performed during said purchase transactions.

14. A checkout system, comprising: a single serial flow lane that defines a flow lane axis; a plurality of checkout stations disposed adjacent to said single serial flow lane, wherein each of said plurality of checkout stations is operative to perform purchase transactions, and further wherein each of said plurality of checkout stations defines a customer side and a store personnel side; and a shelf interposed between each set of adjacent checkout stations of said plurality of checkout stations, wherein said shelf is movable between (i) a first position in which said shelf creates a barrier between said store personnel side and said customer side, and (ii) a second position in which an access opening is created between said store personnel side and said customer side that allows passage from said store personnel side to said customer side, and further wherein (i) said shelf defines a shelf orientation axis, and (ii) said shelf is positioned relative to the single serial flow lane such that said flow lane axis and said shelf axis are parallel to each other, wherein each of the plurality of checkout stations defines a checkout station orientation axis, and wherein each of the plurality of checkout stations are skewed relative to the single serial flow lane such that said flow lane axis and said checkout station orientation axis define an angle θ , wherein $10^\circ < \theta < 60^\circ$.

15. The checkout system of claim 14, wherein: each of the plurality of checkout stations including a rotatable scanner, a customer display, and a clerk display, conversion of any one of the plurality of checkout stations between a self-checkout configuration and an assisted checkout configuration comprises rotating the rotatable scanner from a first location to a second location, and selective activation of said customer display and said clerk display.

16. The checkout system of claim 14, wherein $20^\circ < \theta < 40^\circ$.

17. The checkout system of claim 16, wherein θ is equal to about 25° .

18. A checkout system, comprising: a single serial flow lane that a flow lane axis; a plurality of checkout stations disposed adjacent to said single serial flow lane, wherein each of said plurality of checkout stations is operative to perform purchase transactions, and further wherein each of said plurality of checkout stations defines a customer side and a store personnel side; and a shelf interposed between each set of adjacent checkout stations of said plurality of checkout stations, wherein (i) said shelf defines a shelf orientation axis, and (ii) said shelf is positioned relative to the single serial flow lane such that said flow lane axis and said shelf axis are parallel to each other, wherein each of the plurality of checkout stations defines a checkout station orientation axis, and wherein each of the plurality of checkout stations are skewed relative to the single serial flow lane such that said flow lane axis and said checkout station orientation axis define an angle θ , wherein $10^\circ < \theta < 60^\circ$.

19. The checkout system of claim 18, wherein $20^\circ < \theta < 40^\circ$.

20. The checkout system of claim 18, wherein each of said plurality of checkout stations is operative to receive payment for purchases performed during said purchase transactions.

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